

THE DASHRULEX PACKAGE

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Draw dashed rules

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The dashrulex package provides a flexible solution for drawing dashed rules in the body, and currently provides two commands `\hdashrule` and `\hanyrule`. It's written in \LaTeX 3 and can be used as an alternative to the dashrule package.

Table of Contents

1. Preface	1	A. References	3
2. User commands	1	B. Index	3
3. Known issues	3		

1. Preface

Sometimes it is necessary to draw dashed rules when writing documents, such as guides in the table of contents and indexes, horizontal lines in headers and footers, and even adding horizontal lines after headings. Macro packages such as dashrule and nccrules are available to accomplish this. Considering that dashrule has not been updated for a long time, dashrulex rewrites it using \LaTeX 3 syntax and enhances it a bit.

2. User commands

`\hdashrule[\langle raise \rangle][\langle leader \rangle]{ \langle width \rangle }{ \langle thickness \rangle }{ \langle dash rules \rangle }`

The command to draw horizontal dashed rules, based on the `\rule` command, and the same as the `\rule` command when the \langle dash rules \rangle are empty. \langle raise \rangle is the vertical offset of the rule. \langle leader \rangle is the alignment of the dashed line fill, which can be empty, c, or x (the default), corresponding to the `\leaders`, `\cleaders`, and `\xleaders` commands, respectively. \langle width \rangle is the length of the dashed rule, which can be set to `\fill` to indicate an arbitrarily long distance when you need to fill the entire horizontal center of the plate. \langle dash rules \rangle is expressed as \langle length 1 \rangle | \langle length a \rangle , \langle length 2 \rangle | \langle length b \rangle , ..., where \langle length 1 \rangle represents the length of the

2. User commands

solid line and $\langle length\ a \rangle$ represents the length of the empty space, such as 5pt|2pt,3pt, if the empty space is empty, then it is equal to the solid line length.

```
1X\rule{2cm}{1pt}x \\
2X\hdashrule{2cm}{1pt}{ }x \\
3X\hdashrule{2cm}{1pt}{1pt}x \\
4X\hdashrule{4cm}{1pt}{1pt}x \\
5X\hdashrule[0.5ex]{4cm}{1pt}{1pt}x \\
6X\hdashrule[0.5ex]{4cm}{1pt}{3mm}x \\
7X\hdashrule[0.5ex]{4cm}{1mm}{3mm}x \\
8X\hdashrule[0.5ex]{4cm}{1mm}{3mm|3pt}x \\
9X\hdashrule[0.5ex]{4cm}{1mm}{3mm|3pt,1mm|2pt}x
```

```
1X_____x
2X_____x
3X.....x
4X.....x
5X.....x
6X— — — — — x
7X■ ■ ■ ■ ■ x
8X■■■■■■■■■■ x
9X■ ■ ■ ■ ■ ■ ■ ■ x
```

`\hanyrule`[$\langle leader \rangle$][$\langle width \rangle$][$\langle symbol\ list \rangle$]

This command sets the length of the dotted rule and fills it with arbitrary symbols. $\langle symbol\ list \rangle$ can be more than one symbol and they are separated by **commas**. Symbols are best packed in boxes of a certain length, as spacing between symbols is not provided.

```
\newcommand{\dblelement}
{%
  \tikz[color=blue]
  {
    \draw[line width=0.8mm](0mm,1.1mm)--(3mm,1.1mm);
    \draw[line width=0.3mm](0mm,0mm)--(3mm,0mm);
  }%
}

1X\hanyrule[] {5cm}{\makebox[8pt][l]{$\cdots$}}x \\
2X\hanyrule[c] {5cm}{\makebox[8pt][l]{$\cdots$}}x \\
```

```

3X\hanyrule[x]{5cm}{\makebox[8pt][l]{\cdot$}}x \\\
4X\hanyrule[c]{5cm}{\makebox[8pt]{\cdot$}}x \\\
5X\hanyrule[x]{5cm}{\makebox[8pt]{\cdot$}}x \\\
6X\hanyrule[x]{5cm}{\makebox[8pt]{\cdot$}},\makebox[8pt]{\circ$}}x \\\
7X\hanyrule[x]{5cm}{\makebox[5mm]{\dblelement}}x

```

```

1X . . . . . x
2X . . . . . x
3X . . . . . x
4X . . . . . x
5X . . . . . x
6X . o . o . o . o . o . o . o . o . o x
7X = = = = = x

```

3. Known issues

Currently only horizontal dashed line drawing is supported, with future plans to support vertical dashed lines, and even box dashed borders and so on.

A. References

- [Pak13] Scott Pakin. dashrule. version 1.3, Mar. 28, 2013 (or newer).
URL: <https://www.ctan.org/pkg/dashrule>.
- [Roz05] Alexander I. Rozhenko. nccrules. version 1.0, May 13, 2005 (or newer).
URL: <https://ctan.org/pkg/nccrules>.
- [Tea22] The L^AT_EX Project Team. The L^AT_EX3 Interfaces. Feb. 24, 2022 (or newer).
URL: <https://ctan.org/pkg/l3kernel>.

B. Index

C	L
\cleaders 1	\leaders 1
F	R
\fill 1	\rule 1
H	X
\hanyrule 1f	\xleaders 1
\hdashrule 1	